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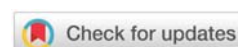
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## Research Article

# Due to covid-19 perform the survey study about plant height (soybean & chickpea) at different temperature range (maximum/minimum)

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## Abstract

Our article is briefly define my self , it is based on the plant life . In which i describe that how plant response under normal temperature. The changes in the temperature over the next 30-50 years are predicted to be in the range of 2-3°C . Our script are not based on the academic experimental method . In this work i was used seeds of soybean & chickpea only for to know how plant responses under normal temperature condition with normal tap water. I was put the some seeds of soybean & chickpea, and was sowing different pots with fertile soil. This work is related to our dissertation experiment, and i was apply at in my indoor garden due to crisis (Covid-19) period. I have identify that the impact of maximum and minimum temperature range on height of both plant only at one month time period. Result of this work, at normal temperature with enough water supply the height of both plant normal but at the high temperature the plant height decline. Extreme temperature events may have short term duration of a few days with temperature increase of over 5°C above the normal temperature. This script suggested that kept the poted plant under normal temperature range with required water.

## Introduction

In the life cycle of plant , and are primarily the phenological responses, i.e., stages of plant development. For all species of plants, range of maximum and minimum temperatures make the the boundaries of observable growth. For reproductive development of many plant species has a higher optimum temperature. Cardinal temperature values for selected annual crops are given in [1] for different species. As daytime temperatures raising from 31 to 36 °C, seed set on male-sterile, female fertile soybean (*Glycine max* (L.) Merril) plants decreased [2]. At the time of photoperiod sensitive crops, e.g., soybean, chickpea would also interact with temperature, and causing a disturbance in phenological development. In normally , extreme high temperatures during the reproductive stage will affect pollen viability, fertilization, and grain or fruit formation [3]. Therefore, many days of upraised temperature may affect fertility of flowers in their formative 6-day phase [4]. On the other, after a certain point, higher air temperatures

show positive affect plant growth, pollination, and reproductive processes [5,6]. Perpetual plants are also susceptible to to increasing temperatures similar to yearly plants. According to our experiment, the impact of extreme temperature from either acute exposure can have large impacts on plant growth and development.

## Methodology to our indoor experiment during covid-19

Our manuscript are based on the indoor experimental condition at the time of covid-19. This work is completely similar to our dissertation experiment, which has done from Mohammad Ali Jauhar University, Rampur (U.P.) India. Here, in our little experiment define the observation of plant height (length (cm) at different temperature (maximum/minimum) in the one month time period. For this work i was used seeds of soybean (*Glycine max*) and chickpea (*Cicer arietinum*), normal tap water, fertile soil, 10 cm two pots, and most important sunlight. Sunlight is the main source for the life cycle of the plant but at the maximum temperature the plant height becomes reduced

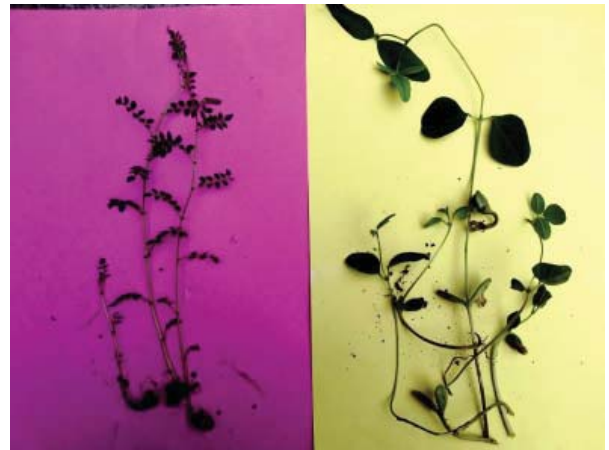
as compared with normal temperature. The best temperature for indoor plants is 65°C. The overall experiment was complete without the use of computer because the purpose of this work only for observation of plant height non-statistically. Some plants are also susceptible to exposure to increase temperature similar to annual plants. Exposure to high temperature, 22°C for some plants during reproduction increase the fruit size [7].

## Result and discussion

Our result is briefly define because it is indoor work without the use of statistics. In this work i notify that the height of soybean (*Glycine max*) and chickpea (*Cicer arietinum*) plant was reduces because of maximum temperature range. As shown in picture. d at the normal range of temperature the height of the both plant appeared normal with the use of tap water. The major impact of warmer temperatures was during the reproductive stage of development, but in some cases yield was significantly decline by 90% from a normal temperature range. In our study, at high temperature put the pots under the sunlight in the afternoon, which is dengrous for plants height, while the temperature was at 4°C above average through out the growth time. On the other hand i observed that at the time of morning temperature becomes normal which is good for plants developments and flowering. The temperature responses of different species has been describe by Prasad, et al. [8,9]. Vulnerability of plants to temperature extremes at the onset of the reproductive stage has a major impact on fruit or grain production in all species. Temperature impact are increase by water deficit. Potential strategy to minimize this impact is to select variety, which shed their pollen in the early morning when temperature are cooler [10] Figures 1 a-d.



Picture 1c: Show sowing of seeds



Picture 1d: Picture 1: Showed normal plant hieght of chickpea & soybean at minimum temperature ranger with in one month.



Picture 1a: Soybean seeds.



Picture 1b: Chickpea seeds

## Conclusion

These observations and the results from the literature suggest that the interactions between temperature and soil water availability within a any species to determine the negative impact on plant growth & development. Temperature effects on plant growth and development is dependent upon plants species. The effects of increasing temperature exhibit a larger impact on yield growth because of the increased minimum temperature.

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